

## HYGIENE AND PUBLIC HEALTH

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UNDER THE CHARGE OF

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**Influenza in Three Chicago Groups.**—JORDAN (*Public Health Reports*, 1919, xxxiv, 1528) summarizes the result of his studies as follows: With respect to age the figures show a higher attack rate among the pupils of the university elementary school (ages four to thirteen) than among those of the high school (ages fourteen to eighteen); the teachers in these schools had a lower attack rate than the pupils. Apparently a definite selective age incidence is manifested since the pupils in these schools are from the same section of the city and to a large extent from the same families, and were presumably exposed in similar degree. With respect to sex there was no noteworthy difference among the pupils in the high and elementary schools (attack rates, 230 for boys, 231 for girls). It is fair to assume that the chances for acquiring infection were substantially the same for these children and that one sex was as much exposed to infection as the other. Among the employees of the Chicago Telephone Company, on the other hand, the men were affected in considerably lower proportion than the women (151 per 1000 for men and 233 for women). Probably the age factor was largely responsible for this difference, since the women employees are of a much lower average age than the men. Illness reported under the heading of "Colds," etc., seems to have been at a considerably higher level during the autumn of 1918 than during the corresponding period of 1917. This was particularly the case among the pupils of the university schools and to a somewhat lesser degree among the employees of the Chicago Telephone Company. Comparison of the reported cases of influenza and colds in the latter group for the months of September and November suggests that some cases of influenza were reported under the former heading. The differing degrees of incidence in the various groups here considered are specially striking. The attack rate among the employees at the various Chicago telephone exchanges ranged from 30 to 270 per 1000, although the working conditions in the several exchanges were not materially different. The highest attack rate recorded for any group occurred among members of one section of the Student Army Training Corps at the University of Chicago (398 per 1000), while the lowest (39 per 1000) was among the members of the other section of the same corps. The former group was particularly exposed to infection, while the latter, although composed of men of similar ages, living under substantially similar conditions with those of the first group, were guarded to a considerable extent against contact with beginning cases. The

data obtained in regard to the schools apparently indicate that the schools were not important distributing centers for the infection. No explosive outbreak occurred in any one grade, and the four days of the Thanksgiving holiday evidently afforded more favorable opportunities for infection than did the days of regular school attendance. The low pneumonia incidence and the absence of deaths among the pupils of these schools (188 cases) is noteworthy. The influence of careful supervision of a somewhat segregated group of individuals is shown by the low attack rate in section A of the Student Army Training Corps.

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**The Occurrence of Malaria Parasites in Anopheles Crucians in Nature.**—MAYNE (*Public Health Reports*, 1919, xxxiv, 1355) reports that *Anopheles crucians*, which a few years ago was established as an efficient host for the malaria parasites under experimental conditions, has been found infected in nature, a single specimen having come under his observation among 20 examined, while 17 infected *A. quadrimaculatus* were found among 709 examined.

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**Anopheles Crucians Wied. as an Agent in Malaria Transmission.**—METZ (*Public Health Reports*, 1919, xxxiv, 1357) made observations on the habits of *Anopheles crucians*, with reference to the probability of this species transmitting malaria, and found that it is not often present in dwellings unless the species is very prevalent but it is very common in privies. He found about as high a percentage of infection among *Anopheles crucians* as among *Anopheles quadrimaculatus*. Metz's conclusions are as follows: It is believed that the data given above leave no doubt as to the susceptibility of *Anopheles crucians* to infection with malaria plasmodia under natural conditions. Likewise, they indicate that, although the habits of this species are probably less conducive to natural infection than are those of *quadrimaculatus*, nevertheless a considerable amount of infection occurs. This evidence of *crucians*' susceptibility of infection in nature, taken in conjunction with the demonstration of its infectivity; *i. e.*, its role as a vector, under laboratory conditions (Mitzmain, 1916 (a), King, 1916), would indicate that this species is potentially of definite sanitary importance. The evidence is too meager, however, to indicate the degree of importance it merits as compared with *quadrimaculatus* and *punctipennis*. Considering its habits, it seems probable that *crucians* is primarily an out-of-door biter, *i. e.*, it is probably most effective on porches and in outhouses. If such proves to be the case, especial precautions against out-of-door exposure in the evening will be necessary in *crucians* infested districts, whereas screening of dwellings will be relatively unimportant except where other species must also be considered.

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**The Epidemiology of Influenza.**—FROST (*Public Health Reports*, 1919, xxxiv, 1823) reviews the course of the epidemic in the United States in a manner that does not permit of satisfactory abstracting, but the views of the author on several points are of such great interest as to justify special mention: The data indicated that one attack confers immunity against a second one, at least for a period of several months. The general characteristics of the epidemic are similar to those of the 1889-1890 epidemic, but there was a higher frequency of pneumonia and a

higher mortality, especially among young adults. The disease is believed to be spread "directly by contact, in the broad sense." As to the probability of recurrence, the author points out that previous experience leads us to expect this, but as the epidemic of this past year has been unusually severe and has shown several distinct phases, we have some ground for hoping that it has probably run its course.

**The Malaria Problem of the South.**—CARTER (*Public Health Reports*, 1919, xxxiv, 1927) stresses the fact that mortality statistics give no adequate indication of the great economic losses chargeable to malaria. He states that each death from pneumonia corresponds to about 125 days' illness; one from typhoid fever 450 to 500 days, while one from malaria corresponds to 2000 to 4000 sick days. The amount of malaria may be as high as 90 per cent. of the population and 40 per cent. to 60 per cent. is not unusual, and this fact is rapidly and certainly reflected in economic conditions. The area of severe prevalence is lessening, due largely to improved economic conditions and to reduction in the price of quinin. The following methods of control are described and their applicability indicated: (1) Get rid of *Anopheles* mosquitoes—no other kinds make any difference in malaria; (2) prevent the access of *Anopheles* mosquitoes to man; (3) free all persons in the community from malaria parasites; (4) protect persons against infection by means of quinin.

**Occupation and Mortality.**—WYNNE and GUILFOY (*Public Health Reports*, xxxii, 885) show that in New York, in 1914, the relative mortality from pulmonary tuberculosis was lower among blacksmiths, considered as a group, and also in each age group, than the average relative mortality from the same cause, of all occupied persons over fifteen years of age. Clerks, bookkeepers, office assistants, etc., had a mortality from the disease almost twice that of all occupied persons over fifteen years of age, while cigar-makers and tobacco-workers had a mortality 25 per cent. above the average. Garment workers' mortality from pulmonary tuberculosis compared favorably with that of all occupied persons, while that of laborers ranked next to bookkeepers and clerks' mortality from the disease. The tuberculosis mortality for machinists was higher than the average, as was that for painters, paper-hangers, varnishers, etc. Among railway track and yard-workers and saloon-keepers the mortality from the disease was not greatly in excess of the average. The mortality from tuberculosis among teamsters and drivers was so much above the average as to attract special attention; it is believed to be largely due to the high incidence of alcoholism. Cancer mortality was high among those engaged in sedentary occupations and low in the occupations requiring active physical labor. Mortality from cancer was low where that from tuberculosis was high. It was lowest among teamsters and drivers, among whom tuberculosis was highest. The highest percentage of deaths from alcoholism occurred among saloon-keepers and bartenders, with that of laborers next. Organic heart disease mortality was low for blacksmiths, printers, varnishers, painters, paper-hangers, teamsters, railway track and yard employees and laborers, and very low among clerks, bookkeepers, office assistants, etc., and saloon-keepers. It was high among cigar-

workers and garment-workers. The mortality from nephritis was above the average among blacksmiths, garment-workers and cigar-workers. It was low or close to the average among those engaged in the other occupations. The mortality from lobar pneumonia was above the average among blacksmiths, clerks and bookkeepers, teamsters, laborers, track and yard workers, saloon-keepers and compositors and printers, especially among the latter. Mortality from the disease among painters and paper-hangers, machinists and garment-workers was not excessive. The pneumonia mortality for tobacco workers was very low. The highest mortality from cirrhosis of the liver was among saloon-keepers. Occupation appeared to have no bearing in other cases. Mortality from suicide was highest among cigar-makers, garment-workers and saloon-keepers. The majority of deaths from lead-poisoning occurred among painters. Mortality from accident was higher than the average among blacksmiths, laborers, machinists, painters, paper-hangers, teamsters and railway track and yard workers, the highest being among the latter. Poorly ventilated shops accounts for the high mortality from respiratory diseases among clerks, bookkeepers, etc., and printers and compositors. The low mortality from pulmonary tuberculosis among garment-workers is explained by the racial immunity and the manufacture of clothing in the homes. Inasmuch as mortality from cancer is uniformly lower in strenuous occupations, there appears to be some relation between the disease and occupation. The unduly high mortality from heart and Bright's disease among tobacco-workers and garment-workers cannot be entirely explained by the advanced age of the occupants. Alcohol appears to be an important hazard among saloon-keepers. The pneumonia hazard seems to be greatest among those grouped together in offices and shops and among those alternately exposed to high and low temperatures.

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**The Dust Hazard in the Abrasive Industry.**—WINSLOW, GREENBERG and GREENBURG (*Public Health Reports*, 1919, xxxiv, 1171) state that exposure to mineral and metallic dusts is accompanied by excessive tuberculosis ratios. The small, sharp, hard, non-absorptive particles are the most dangerous ones. The inhalation of these leads to an initial fibrosis which leads in many cases to the development of pulmonary tuberculosis. The manufacture of abrasive materials is, by its very nature, exceptionally hazardous. Examinations of the dust at various parts of abrasive factories showed varying and often large numbers of particles, and this is true even of offices and out of doors near the factory. Suggestions are made looking to the reduction of the dust hazard in the abrasive industry.

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